

Attorney's #09/761,396  
11/16/01 →

William R. Moser et al.

10/25/99 (earliest)

11/2/99  
there is no  
no catalyst  
no structure  
of the claims  
in the  
claims  
except for  
the body of  
claims of the  
prior art  
limitations.

We claim:

1. A catalyst formed by cavitation wherein the cavitation comprises passing a metal containing solution at elevated pressure and at a velocity into a cavitation chamber, wherein said cavitation chamber creates a controllable cavitation zone to form a cavitated product.

The catalyst of claim 1 wherein both high shear and at least some in situ calcination of the metal containing solution occur in the cavitation chamber.

3. The catalyst of claim 1 wherein the cavitation chamber comprises a flow-through channel having a flow area, internally containing a first element that produces a local constriction of the flow area, and having an outlet downstream of the local constriction; and a second element that produces a second local constriction positioned at the outlet, wherein a cavitation zone is formed immediately after the first element, and an elevated pressure zone is created between the cavitation zone and the second local constriction.

4. The catalyst of claim 3 wherein the velocity of the metal containing solution passing into the cavitation chamber is at a velocity sufficient to create cavitation bubbles to form downstream of the first element.

5. The catalyst of claim 1 wherein the metal containing solution is a metal salt solution.

6. The catalyst of claim 5 wherein the metal salt is selected from the group consisting of nitrate, acetate, chloride, sulfate, bromide, and mixtures thereof.

7. The catalyst of claim 6 wherein the metal in the metal containing solution is selected from the group consisting of cobalt, molybdenum, bismuth, lanthanum, iron, strontium, titanium, silver, gold, lead, platinum, palladium, yttrium,

5

zirconium, calcium, barium, potassium, chromium, magnesium, copper, zinc, and mixtures thereof.

8. A silver catalyst on alumina support having the charecteristics shown in Fig. 3 of the present invention.

9 A CuO composition having the charecteristics of shown in Fig. 4 of the present invention.

10 A high temperature palladium catalyst comprised of a small grain material which is stable at temperatures of less than abot 1200 degrees Celsius.

characteristics of  
the ~~list~~ <sup>new</sup> claimed  
catalyst  
is not  
interpreted  
in light of  
spec.?

delete the  
characteristics  
might be

"(1-20nm)"  
particles

object  
(1-20nm)

09761396-011501